

NAMPA HATCHERY
ANNUAL REPORT

October 1, 1989 to December 31, 1990

Prepared by

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INTRODUCTION

Nampa Hatchery is a salmonid rearing facility located two miles south of Nampa. The water supply includes eight artesian wells with a combined flow of 18 to 38 cfs of 59°F water. Built in 1975 and purchased by the Idaho Department of Fish and Game in 1982, fish rearing facilities consist of a hatchery/crew quarters building with four upwelling incubators and four early rearing vats. Outside rearing tanks include 16 fry raceways, 3 fingerling raceways, and 10 production raceways. Up to 9 additional upwelling incubators can be used in the fry raceways to increase egg incubating capacity. A settling pond treats flows from the production units before discharge into Wilson drain.

Nampa hatchery planted 4,290,721 fish totalling 275,496 pounds during fish year 1989-1990. This represents a 281% increase over the previous years' production. It should be noted that three additional months of production are included in this reporting period. Rainbow trout of various strains were the major fish produced totaling 2,261,029 fish and 176,355 pounds. In addition, Kamloops, brown trout, and Lahonton cutthroat were produced (Table 1).

HATCHERY IMPROVEMENTS

During the 1989-1990 production year, 30-hp pumps were installed on two artesian wells located south of the hatchery. As a result, the hatchery gained approximately 8 cfs of flow.

New conduit bar tail screens were constructed for the C Ponds.

A new 1-ton truck, radial arm saw, riding lawn mower, and eight automatic belt feeders were purchased as well.

FISH PRODUCTION

Production in terms of poundage produced (275,496 pounds) during last year was approximately 6% higher than the previous year's production. The total number of fish stocked was 4,290,721, and the overall feed conversion was 1.2. Flows ranged from 20 cfs to 37.5 cfs for an average flow of 31.74 cfs (Figure 1).

Total fingerling production increased by 546% over last years production and 1,697% from two years ago. See Table 2 for specific details.

A total of 6,150,075 eggs were received during the fish year 1989-1990. (Table 3).

Total production of each species/strain is listed on Tables 4 and 5.

Table 1. Fish requested and produced.

Species & size		Production goal	Percentage actual production	Percentage of goal achieved
Rainbow	8+ inches	430,000	340,252	79%
Brown	8+ inches	0	1,200	excess
Kamloops	8+ inches	0	36,481	excess
Rainbow/ Cutthroat	8+ inches	Transfer from American Falls	63,270	N.A.
Brown	<8 inches	77,000	85,579	111%
Lahonton	<8 inches	522,000	671,293	129%
Kamloops	<8 inches	911,000	1,171,869	129%
Rainbow	<8 inches	1,123,000	1,920,777	156%

Figure 1.

NAMPA HATCHERY WATER FLOWS

1989-90

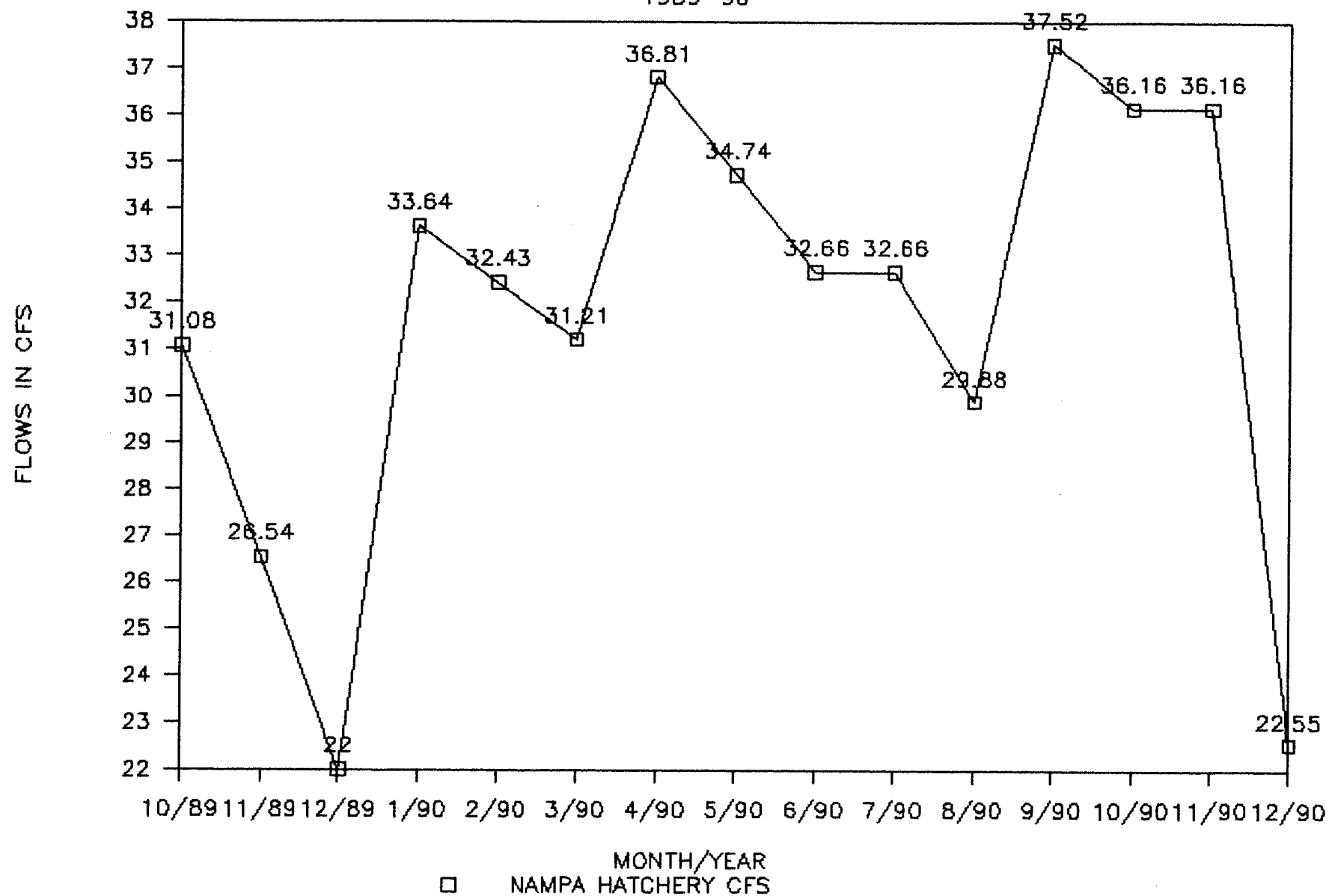


Table 2. Fingerling production.

Species	1989-90	1988-89	1987-88
Brown	85,579	68,615	65,192
Lahonton	671,293	110,195	66,000
Kamloops & Rainbow	3,092,646	526,015	95,700
Totals	3,849,518	704,825	226,892

Table 3. Eggs recieved at Nampa hatchery, October 1, 1989 to December 31, 1990.

Species/ strain	Received date	Source	Number	Percent hatch	Destination	Expected yield	Cost/ 1,000
Rainbow/R9	11/8/89	Hayspur	350,025	75	Region 3,5	241,517	n/c
Brown/BN	11/28/89	Saratoga	171,795	60	Region 1,3	85,579	n/c
Rainbow/R9	12/4/89	Hayspur	355,696	75	Region 3,5	245,430	n/c
Kamloop/K1	12/5/89	Skanes	360,585	80	Region 2,3	227,169	8.00
Rainbow/R9	12/12/89	Hayspur	183,593	60	Region 3,5	126,679	n/c
Kamloop/Ki	12/18/89	Skanes	394,482	85	Region 2,3	248,524	8.00
Kamloop/K1	1/18/89	Skanes	379,789	80	Region 2,3	239,267	8.00
Rainbow/R7	2/4/90	Ennis	185,187	60	Region 3,5	94,445	n/c
Kamloop/K1	2/4/90	Skanes	133,333	80	Region 2,3	84,000	n/c
Rainbow/R7	2/26/90	Creston	278,947	65	Region 3,5	142,263	n/c
Rainbow/R7	3/5/90	Creston	422,002	65	Region 3,5	215,221	n/c
Rainbow/R7	3/13/90	Creston	157,383	65	Region 3,5	80,265	n/c
Rainbow/R7	3/20/90	Creston	118,324	65	Region 3,5	60,345	n/c
Rainbow/R7	3/26/90	Creston	242,105	65	Region 3,5	123,474	n/c
Rainbow/R1	4/5/90	Erwin	71,955	75	Region 1,3	35,000	n/c
Cutthroat/C6	5/2/90	Omak	408,432	80	Region 2,3,5,6	285,902	n/c
Cutthroat/C6	5/4/90	Omak	292,608	80	Region 2,3,5,6	204,826	n/c
Cutthroat/C6	5/9/90	Omak	109,728	80	Region 2,3,5,6	76,810	n/c
Rainbow/R1	5/31/90	Mt. Lassen	200,000	60	Region 3	100,000	10.00
Rainbow/R1	7/24/90	Erwin	292,454	60	Region 3	150,000	n/c
Rainbow/Ri	9/20/90	Erwin	254,490	75	Region 3	100,000	n/c
Rainbow/R9	11/5/90	Hayspur	313,341	75	Region 3	265,000	n/c
Rainbow/R9	11/27/90	Hayspur	323,821	65	Region 3	200,000	n/c
Browns/BN	11/29/90	Saratoga	150,000	75	Region 1,3,4	83,000	n/c
Total			6,150,075			3,714,716	

Table 4. Fingerling production at Nampa Hatchery, 1989-1990.

Species/ strain	Source & date	Number received	Yield number	Yield pounds	Percent survival egg to plant	Destination	Cost/ fish	Cost/ pound
Kamloop/K1	Skane 11/88-2/89	1,125,000	211,560	23,475	67 ^a	Region 2,3,5	0.2	0.17
Rainbow/R1	Lost River 3/89	250,000	29,355	2,575	50 ^b	Region 3	0.15	0.17
Rainbow/R7	Creston 4/89	611,592	307,640	15,800	50	Region 3	0.009	0.17
Rainbow/R1	Story 4/89	326,184	178,560	9,600	55	Region 3,5	0.009	0.17
Cutthroat/C6	Omak/Mann 5/89-6/89	548,859	342,955	9,725	62	Region 3,5	0.005	0.17
Rainbow/R1	Tazmania 7/89	400,000	87,900	12,025	71 ^c	Region 3	0.15	1.12
Rainbow/R9	Hayspur 11/89-12/89	889,314	580,720	13,150	69	Region 3,5	0.025	0.12
Browns/BN	Saratoga 11/89	171,795	85,579	2,177	50	Region 1,3	0.029	1.12
Kamloop/K1	Skane 12/89-2/90	1,268,189	965,209	33,334	63	Region 2,3	0.039	1.12
Rainbow/R7	Creston 2/89-4/90	1,403,968	719,032	33,930	51	Region 3,5	0.053	1.12
Cutthroat/C6	Omak	810,768	304,909	5,174		Region 2,3,5,6	0.02	1.12

^aA portion of this lot was planted during the 1988-89 fish year.

^bA portion of this lot was planted during the 1988-89 fish year.

^cThe remainder of this lot was planted as catchables during the 1989-90 fish year.

^dSurvival from egg to plant was not calculated because approximately 50% of the lot remained at the hatchery at the end of the fish year.

Table 5. Catchable production at Nampa Hatchery, 1989-90.

Species/ strain	Source & date	Number received	Yield number	Yield pounds	Percent survival egg to plant	Destination	Cost/ fish	Cost/ pound
Kamloop/K1	Skane 11/88-2/89	1,125,000	41,481	20,350	67 ^a	Region 3	.54	1.09
Rainbow/R1	Tazmania 7/89	400,000	195,323	50,774	71 ^b	Region 2,3,4	.28	1.09
Rainbow/R1	Erwin 9/89	195,350	100,828	24,566	52	Region 2,3	.27	1.09
Rainbow/R9	Hayspur 11/89	350,024	33,286	8,285	^c	Region 3	.27	1.09
Rainbow/R1	Mixed Lot 89-90		7,825	5,650	^d	Region 3	.79	1.09
Hybrids/RC	Am. Falls 7/90	68,338	63,270	14,760	^e	Region 2,3	.04	0.16

^aThe remainder of this lot was planted out during the 1988-89 fish year as fingerlings.

^bThe remainder of this lot was planted out as fingerlings (1989-90).

^cThe remainder of this lot was planted out as fingerlings (1989-90).

^dThese were excess broodstock and production fish (1989-90).

^eThese fish were transferred from American Falls Hatchery to make up shortages in other catchable requests for 1989-90.

Browns

Approximately 170,000 brown trout eggs were received from Saratoga National Fish Hatchery in Saratoga, Wyoming on November 28, 1989. Early survival rate was low because of their sensitivity to nitrogen. Also, cannibalism occurred due to the innate behavior of the fish.

A total of 85,579 brown trout fingerlings were stocked between May and September.

Lahonton Cutthroat

During the 1989-90 fish year, Nampa Hatchery stocked 304,909 Lahonton cutthroat into lakes and reservoirs located in Regions 2, 3, 5, and 6.

All 810,768 Lahonton eggs received this year came from the Omak Hatchery in Washington.

FISH HEALTH

Several outbreaks of coldwater disease and occasional outbreaks of BGD occurred during fish year 1989-1990. Fish were treated with TM-50 for 14 to 21 days for coldwater disease and a combination of chemicals were used for the BGD (B.C., Diquat, Chloramine T.).

Qualitative data suggest that there may be a relationship between the increase in coldwater disease outbreaks and increased incubation densities. In an effort to reduce the level of coldwater disease at Nampa Hatchery, prophylactic feeding of TM has been implemented. Results have been inconclusive thus far.

PUBLIC RELATIONS

Every year, the number of tourists increases at the Nampa Hatchery. Tours were given to organized groups such as YMCA, scout, and area school groups. Also, hatchery personnel gave presentations to Hunter Education classes in the Nampa area.

The settling pond was fished by handicapped groups from the Veteran's Home and State School. The fishing was great, which made it an enjoyable experience for all those who participated.

Area sportsmens' groups, Gem State Fly Fishermen, Idaho Free Trappers, Nampa Rod and Gun Club, and Nampa Bow Chiefs utilized the conference room for monthly meetings. This facility was also used for 4-H monthly group meetings.

Bird predation during the 1989-1990 fish year has also contributed to fish health problems. In addition to direct loss, birds also spread potentially sick fish from pond to pond.

SATELLITE PROJECTS

Nampa Hatchery continues to operate the early kokanee salmon (KE) trapping and spawning project at Deadwood Reservoir. Deadwood Reservoir remains a viable source for KE eggs. Trapping of KE adults started on August 9, 1990 and ended on September 13, 1990. An estimated 2,400 adults were hauled from the new trap site, downstream below the mouth of Basin Creek, to the Eagle Hatchery.

Run behavior was quite different than in the past four years. Initially, the run developed slowly. However, by August 24, several thousand fish a day were entering the trap. Another unique characteristic of this years run was that over 50% of the fish entering the trap were ripe. This made transportation difficult; therefore, the majority of fish were spawned at the trap site. No difference in eye-up was observed between green eggs transported from Deadwood and eggs taken at Eagle.

An egg yield of 1,927,079 eggs was taken from 4,052 females for a fecundity rate of 476 eggs per female. Average total length of female and male kokanee was 301.75 mm and 299.97 mm, respectively (Figure 2). Fecundity, along with average total length of spawning females, appeared to have declined since 1986 (Table 2). However, in 1990, fecundity and average total length of spawning females increased (Table 2).

A total of 245,000 green eggs and 60,000 eyed eggs were shipped to Ashton **Hatchery**, and 1,181,000 eyed eggs were shipped to the Mackay Hatchery. As a result of higher than estimated eye-up (85%), 42,424 eyed eggs were shipped to Aqua Seed Corporation in Washington. The remaining 147,835 eyed eggs were discarded because no other sources for KE eggs could be found.

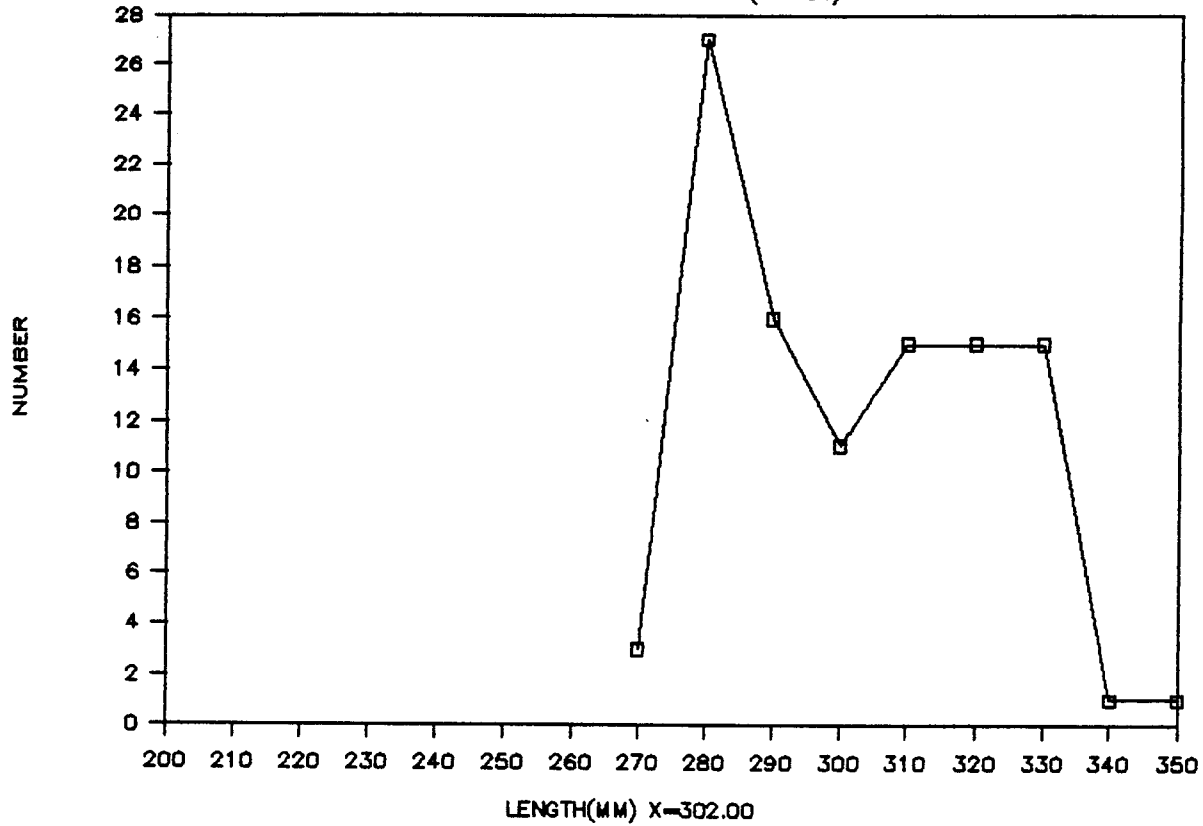
Also, due to the large run size this year, Nampa Hatchery personnel hauled approximately 4,585 KE adults to the South Fork of the Boise River above Anderson Ranch Reservoir.

The Kamiah redistribution project is operated through Nampa Hatchery. A total of 36,163 fish weighing 11,544 pounds were transferred to the Kamiah Pond and stocked in Region 2 waters.

Figure 2.

1990 EARLY KOKANEE—DEADWOOD RES.

LENGTH FREQUENCY FEMALES(N=104)



1990 EARLY KOKANEE—DEADWOOD RES.

LENGTH FREQUENCY—MALES(N=126)

